

SERUM CONCENTRATION OF HCH, DDT AND METABOLITES IN ADOLESCENTS EXPOSED TO ORGANOCHLORINE PESTICIDE RESIDUES IN BRAZIL

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Background and Methods: To evaluate the concentration of biomarkers of exposure to residues of organochlorine pesticides in adolescents in Rio de Janeiro, Brazil.

Methods: We obtained laboratory results of serum concentrations of the isomers of HCH and DDT metabolites from the data collection from medical records at a local health unit from a previous screening.

Results: We observed concentrations were considered well above the tolerance limits allowed. The distribution shows typical asymmetrical pattern, because of the presence of individuals with concentrations outliers distribution. Deserve special attention from the HCH congeners, the p,p'DDT and p,p'DDE; whose serum concentration mean and median are much higher than the level of tolerance permitted. Concentration obtained were from α HCH (115.81 Mean \pm SD 1438.529), β HCH (1616,266 Mean \pm SD 135.15), γ HCH (Mean \pm 5373.357SD 447.66), p, p'DDE (Mean 94.92 \pm 884,979 SD), p, p'DDD (5:23 Mean \pm 43,350 SD), o, p' DDT (3596 Mean 1.82 \pm SD) and p, p' DDT (45.61 Mean \pm SD 464,389). In measuring the correlation between different types of organochlorine compounds evaluated, it is observed that the majority has mayor correlation ($r = 1.000$), or nearly so, with great statistical significance ($p < 0.0001$).

Conclusion: There is needing for monitoring and periodic evaluation of health of this population, considering that the blood is altered especially at this critical period of development.